

Request for Program Test Authority

December 19, 2018

**To: Audio Division, Media Bureau
Federal Communications Commission
Washington, D.C.**

**From: Manuel J. Martinez
Station Manager, KCXU-LP – San Jose, California**

RE: FCC Construction Permit BPL-20180502ACN

KCXU-LP FM - Facility ID # 192235

Center for Careers and Training

San Jose, California

92.7 MHz / Ch.224 – 100 watts ERP

To Audio Division staff:

Per Special Operating Condition 2 of construction permit BPL-20180502ACN, this formal request for Program Test Authority is filed in conjunction with FCC Form 318.

A revised second adjacent waiver showing is provided to matched the installed two-bay dipole antenna demonstrating no interference to second adjacent channel, KSJO.

Respectfully submitted,

 /S/

Manuel J. Martinez
Station Manager
KCXU-LP FM 92.7
Center For Training And Careers
749 Story Road - Suite 10
San Jose, California 95122

Second Adjacent Exhibit & Waiver Request **KCXU-LP – BPL-20180502ACN**

December, 2018

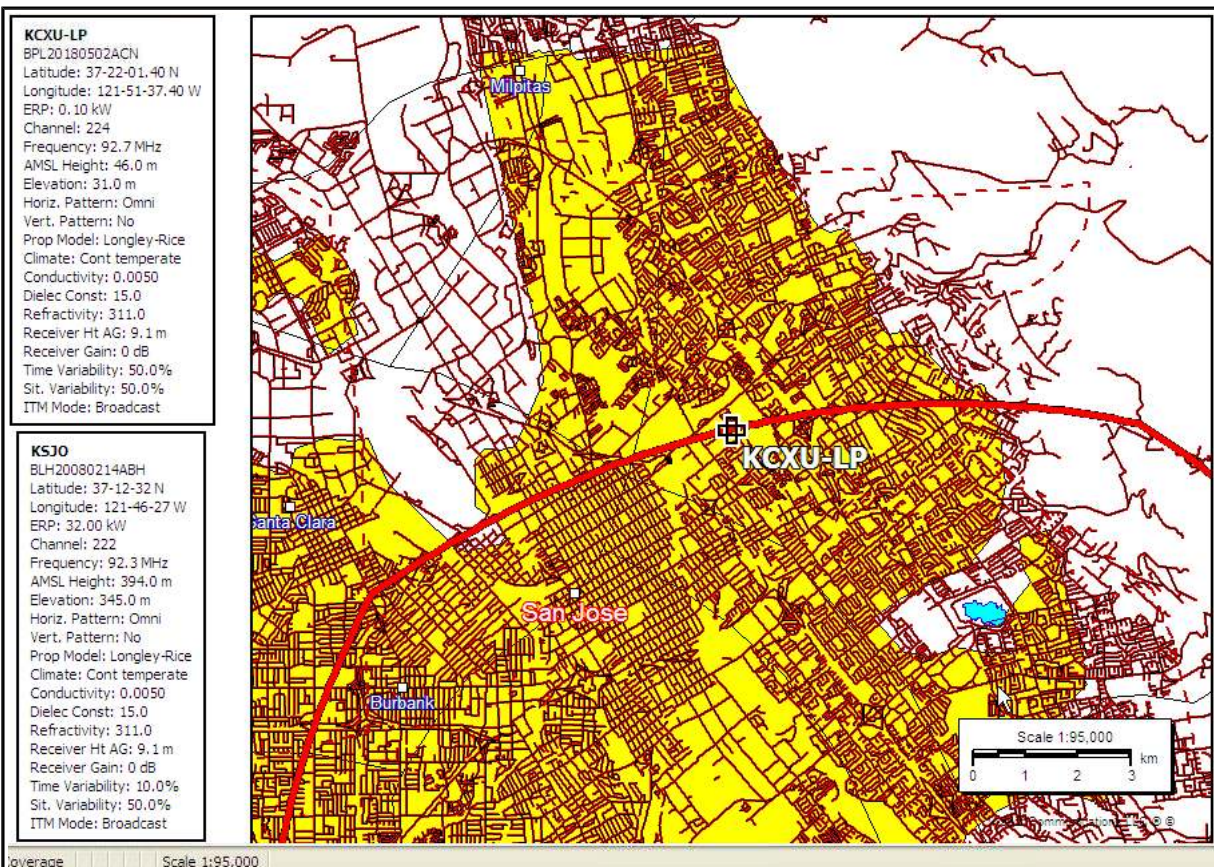
Per Special Operating Condition 2 of construction permit BPL-20180502ACN, this revised second adjacent waiver showing is provided matched to the two-bay dipole antenna installed at the site to demonstrate no interference to the second adjacent channel. A formal request for program test authority is also filed in conjunction with FCC Form 318.

The attached D/U Ratio Study exported from V-Soft FM Probe 4 software shows calculations of estimated signal strength for KSJO (FM) 94.159 dBuV/m at the site. With additional 40 dBu protection, KSJO would be protected to 134.16 dBu, producing a worst-case interference radius of 13.7 meters at the center of radiation. Full data export of engineering parameters for KSJO continue on the next pages.

The antenna relative fields for an SCA FMV 2-bay dipole antenna array installed at the site are tabulated on the following page at 5 degree increments, accompanied by the manufacturer's data sheet for relative field strength at various depression angles. As shown in the following pages, the area of worst-case interference falls no lower than 12.3 meters above ground at a radius of 1.9 meters. Industrial use structure is single story building. Any interference will remain sufficiently cleared of any population.

Export of engineering parameters from V-Soft is included on the next page.

KSJO Second Adjacent field strength at KCXU-LP - calculated to 94.159 dBuV/m



D/U Ratio Study via V-Soft Probe 4 software **Exported calculations of Engineering Study**

KJSO signal calculations at reference point

Point Information Report

Latitude: 37-22-01.40 N
Longitude: 121-51-37.40 W

Signal Strength: 94.159 dBuV/m
Elevation: 30.0 m

Distance From Transmitter: 19.146 km
Azimuth From Transmitter: 336.49 degrees

Call Letters: KSJO
File Number: BLH20080214ABH
Latitude: 37-12-32 N
Longitude: 121-46-27 W
ERP: 32.00 kW
Channel: 222
Frequency: 92.3 MHz
AMSL Height: 394.0 m
Elevation: 345.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Study Information:

D/U Ratio Study

Signal Resolution: 0.5 km
Study Date: 12/11/2018

Land Cover was not considered in this study.

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second Alaska Terrain
Coordinate System: NAD27

Transmitters:

Transmitter Information:

Transmitter Information:

Call Letters: KSJO
File Number: BLH20080214ABH
Latitude: 37-12-32 N
Longitude: 121-46-27 W
ERP: 32.00 kW
Channel: 222
Frequency: 92.3 MHz
AMSL Height: 394.0 m
Elevation: 345.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Transmitter Information:

Call Letters: KCXU-LP.C
File Number: BPL20180502ACN
Latitude: 37-22-01.40 N
Longitude: 121-51-37.40 W
ERP: 0.10 kW
Channel: 224
Frequency: 92.7 MHz
AMSL Height: 46.0 m
Elevation: 31.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Elevation profile data – KSJO FM vs KCXU-LP

KSJO FM

ERP: 32.00 kW

AMSL Height: 394.0 m

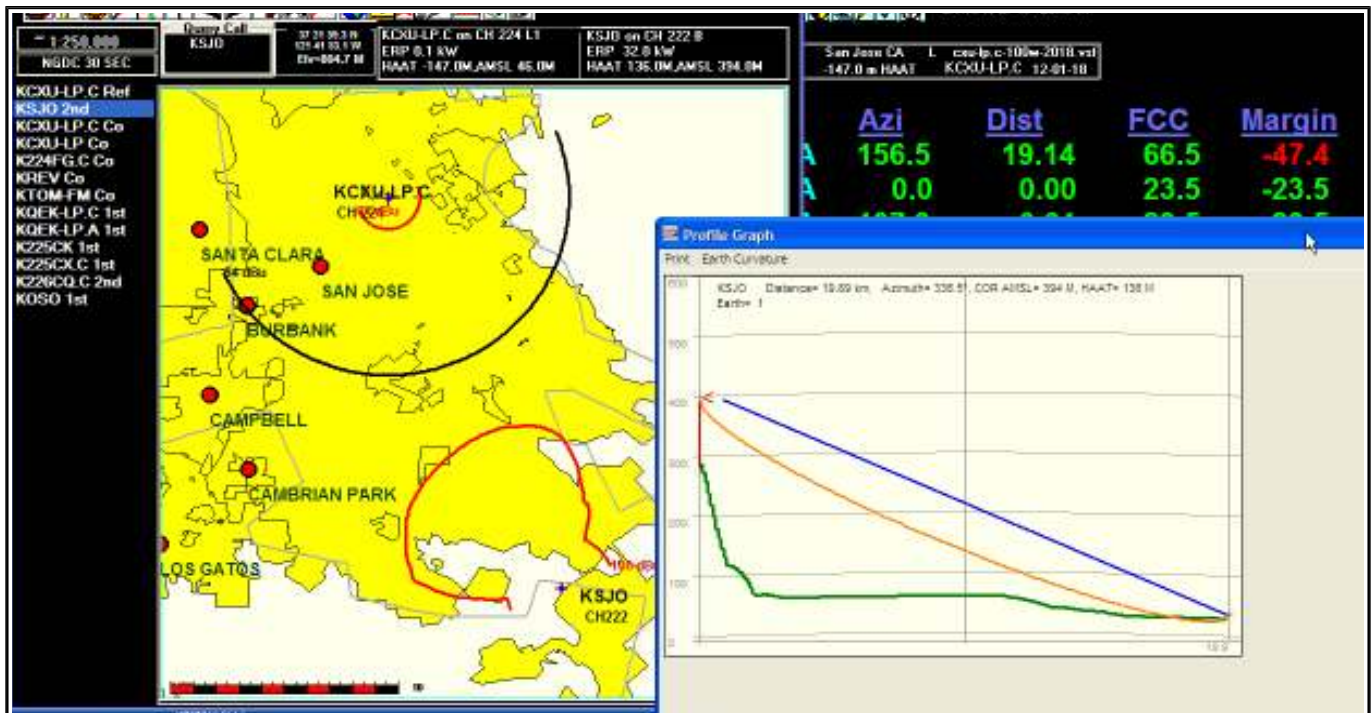
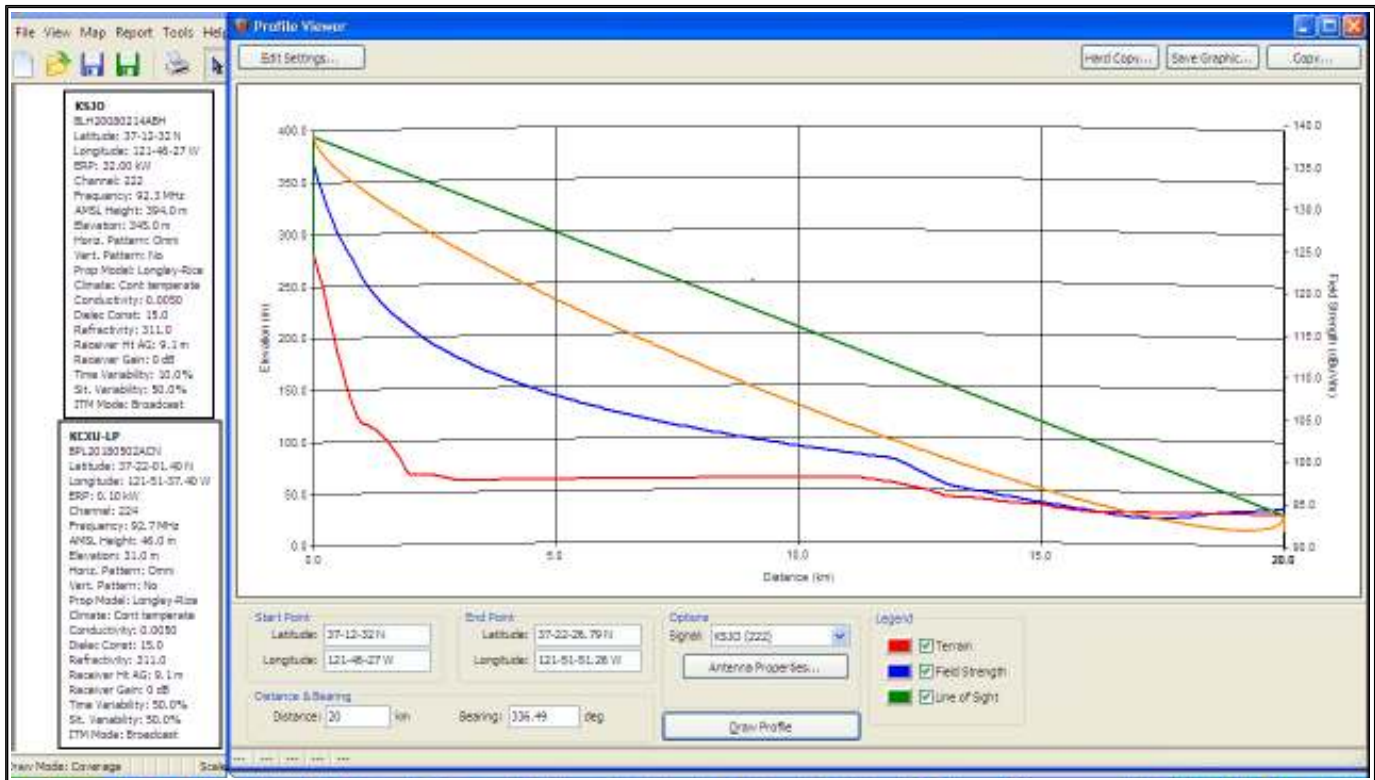
Elevation: 345.0 m

KCXU-LP

ERP: 0.10 kW

AMSL Height: 46.0 m

Elevation: 31.0 m



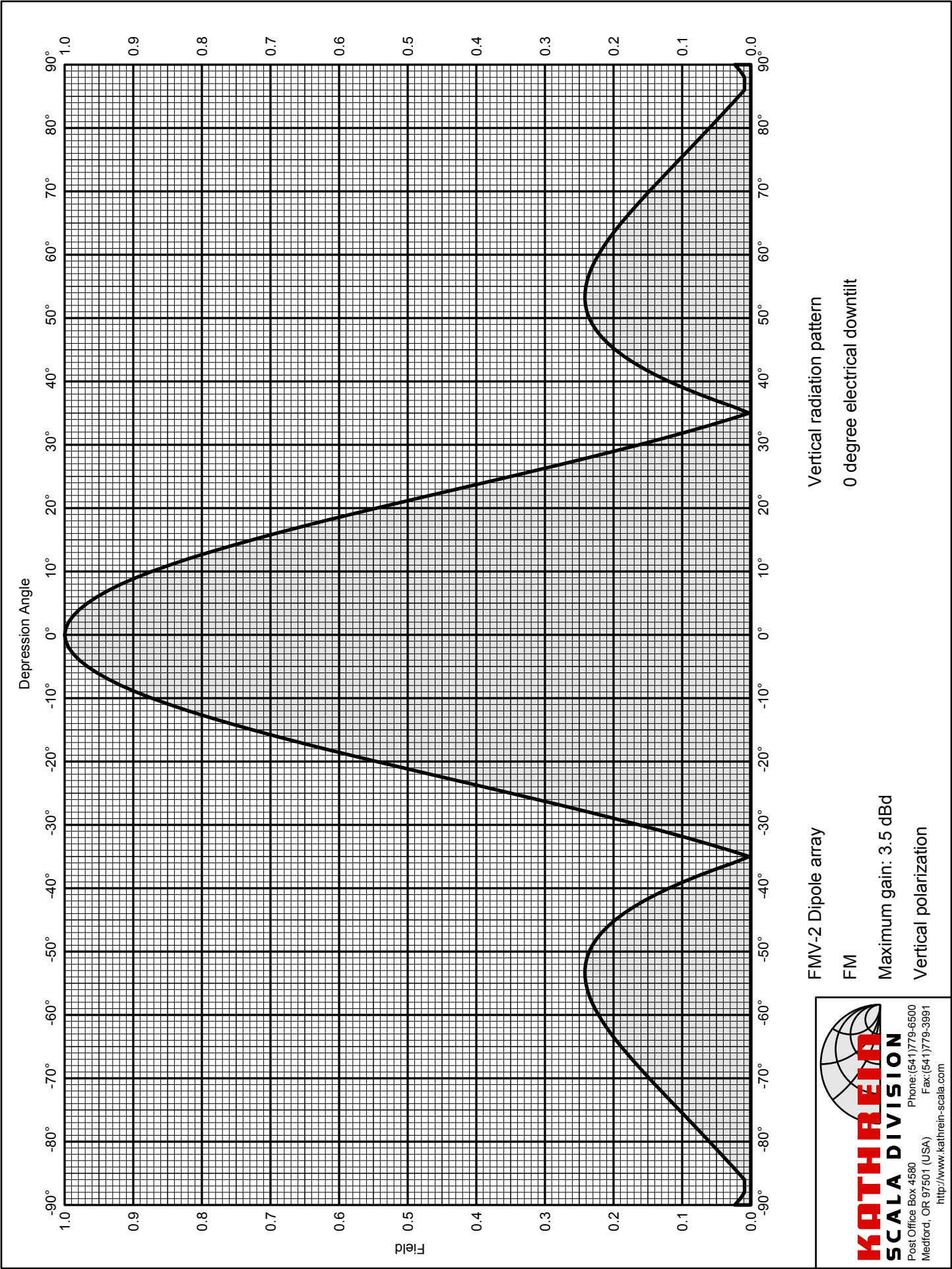
SCA FMV-2 – two bay dipole arrayKCXU-LP FM – BPL-20180502ACN

ERP: 100 watts

AGL: 15 meters

Interfering contour: 134.16

depression angle below horizon	relative field	db from relative	ERP	angular distance to contour	vertical distance	horizontal distance	clearance above ground
0	1.000	0.00	100.00	13.732	0.000	13.732	15.000
5	0.967	-0.29	93.51	13.278	1.157	13.228	13.843
10	0.873	-1.18	76.21	11.988	2.082	11.805	12.918
15	0.726	-2.78	52.71	9.969	2.580	9.629	12.420
20	0.545	-5.27	29.70	7.484	2.560	7.032	12.440
25	0.350	-9.12	12.25	4.806	2.031	4.356	12.969
30	0.163	-15.76	2.66	2.238	1.119	1.938	13.881
35	0.010	-40.00	0.01	0.137	0.079	0.112	14.921
40	0.119	-18.49	1.42	1.634	1.050	1.252	13.950
45	0.198	-14.07	3.92	2.719	1.923	1.923	13.077
50	0.235	-12.58	5.52	3.227	2.472	2.074	12.528
55	0.240	-12.40	5.76	3.296	2.700	1.890	12.300
60	0.222	-13.07	4.93	3.048	2.640	1.524	12.360
65	0.189	-14.47	3.57	2.595	2.352	1.097	12.648
70	0.148	-16.59	2.19	2.032	1.910	0.695	13.090
75	0.104	-19.66	1.08	1.428	1.379	0.370	13.621
80	0.060	-24.44	0.36	0.824	0.811	0.143	14.189
85	0.018	-34.89	0.03	0.247	0.246	0.022	14.754
90	0.023	-32.77	0.05	0.316	0.316	0.000	14.684



FMV-2 Dipole array
FM
Maximum gain: 3.5 dBd
Vertical polarization



KATHREIN
SCALA DIVISION

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FMV-2 Dipole array

FM

Maximum gain: 3.5 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.023	-32.64	-29.14	0.00	-45	0.198	-14.09	-10.59	0.09
-89	0.015	-36.31	-32.81	0.00	-44	0.185	-14.64	-11.14	0.08
-88	0.010	-40.00	-36.50	0.00	-43	0.171	-15.32	-11.82	0.07
-87	0.010	-40.00	-36.50	0.00	-42	0.156	-16.15	-12.65	0.05
-86	0.010	-40.00	-36.50	0.00	-41	0.138	-17.18	-13.68	0.04
-85	0.018	-35.09	-31.59	0.00	-40	0.119	-18.47	-14.97	0.03
-84	0.026	-31.71	-28.21	0.00	-39	0.098	-20.14	-16.64	0.02
-83	0.035	-29.24	-25.74	0.00	-38	0.076	-22.41	-18.91	0.01
-82	0.043	-27.33	-23.83	0.00	-37	0.051	-25.78	-22.28	0.01
-81	0.052	-25.74	-22.24	0.01	-36	0.025	-31.91	-28.41	0.00
-80	0.060	-24.40	-20.90	0.01	-35	0.010	-40.00	-36.50	0.00
-79	0.069	-23.22	-19.72	0.01	-34	0.032	-30.02	-26.52	0.00
-78	0.078	-22.19	-18.69	0.01	-33	0.062	-24.11	-20.61	0.01
-77	0.087	-21.25	-17.75	0.02	-32	0.094	-20.49	-16.99	0.02
-76	0.095	-20.42	-16.92	0.02	-31	0.128	-17.86	-14.36	0.04
-75	0.104	-19.64	-16.14	0.02	-30	0.163	-15.77	-12.27	0.06
-74	0.113	-18.93	-15.43	0.03	-29	0.199	-14.04	-10.54	0.09
-73	0.122	-18.28	-14.78	0.03	-28	0.235	-12.56	-9.06	0.12
-72	0.131	-17.68	-14.18	0.04	-27	0.273	-11.28	-7.78	0.17
-71	0.139	-17.11	-13.61	0.04	-26	0.311	-10.14	-6.64	0.22
-70	0.148	-16.59	-13.09	0.05	-25	0.350	-9.12	-5.62	0.27
-69	0.157	-16.11	-12.61	0.05	-24	0.389	-8.20	-4.70	0.34
-68	0.165	-15.66	-12.16	0.06	-23	0.428	-7.36	-3.86	0.41
-67	0.173	-15.23	-11.73	0.07	-22	0.468	-6.60	-3.10	0.49
-66	0.181	-14.85	-11.35	0.07	-21	0.507	-5.91	-2.41	0.57
-65	0.189	-14.47	-10.97	0.08	-20	0.545	-5.26	-1.76	0.67
-64	0.196	-14.14	-10.64	0.09	-19	0.584	-4.68	-1.18	0.76
-63	0.204	-13.83	-10.33	0.09	-18	0.621	-4.14	-0.64	0.86
-62	0.210	-13.55	-10.05	0.10	-17	0.657	-3.65	-0.15	0.97
-61	0.216	-13.30	-9.80	0.10	-16	0.693	-3.19	0.31	1.07
-60	0.222	-13.08	-9.58	0.11	-15	0.726	-2.78	0.72	1.18
-59	0.227	-12.87	-9.37	0.12	-14	0.759	-2.40	1.10	1.29
-58	0.232	-12.71	-9.21	0.12	-13	0.790	-2.05	1.45	1.40
-57	0.235	-12.57	-9.07	0.12	-12	0.820	-1.73	1.77	1.50
-56	0.238	-12.46	-8.96	0.13	-11	0.847	-1.44	2.06	1.61
-55	0.240	-12.38	-8.88	0.13	-10	0.873	-1.18	2.32	1.71
-54	0.241	-12.34	-8.84	0.13	-9	0.896	-0.95	2.55	1.80
-53	0.242	-12.33	-8.83	0.13	-8	0.918	-0.74	2.76	1.89
-52	0.241	-12.37	-8.87	0.13	-7	0.936	-0.57	2.93	1.96
-51	0.239	-12.44	-8.94	0.13	-6	0.953	-0.42	3.08	2.03
-50	0.235	-12.56	-9.06	0.12	-5	0.967	-0.29	3.21	2.09
-49	0.231	-12.74	-9.24	0.12	-4	0.978	-0.19	3.31	2.14
-48	0.225	-12.97	-9.47	0.11	-3	0.988	-0.11	3.39	2.18
-47	0.217	-13.26	-9.76	0.11	-2	0.994	-0.05	3.45	2.21
-46	0.208	-13.63	-10.13	0.10	-1	0.998	-0.01	3.49	2.23
					0	1.000	0.00	3.50	2.24



FMV-2 Dipole array
FM

Maximum gain: 3.5 dBd
Vertical polarization

Vertical radiation pattern
0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	3.50	2.24	45	0.198	-14.09	-10.59	0.09
1	0.998	-0.01	3.49	2.23	46	0.208	-13.63	-10.13	0.10
2	0.994	-0.05	3.45	2.21	47	0.217	-13.26	-9.76	0.11
3	0.988	-0.11	3.39	2.18	48	0.225	-12.97	-9.47	0.11
4	0.978	-0.19	3.31	2.14	49	0.231	-12.74	-9.24	0.12
5	0.967	-0.29	3.21	2.09	50	0.235	-12.56	-9.06	0.12
6	0.953	-0.42	3.08	2.03	51	0.239	-12.44	-8.94	0.13
7	0.936	-0.57	2.93	1.96	52	0.241	-12.37	-8.87	0.13
8	0.918	-0.74	2.76	1.89	53	0.242	-12.33	-8.83	0.13
9	0.896	-0.95	2.55	1.80	54	0.241	-12.34	-8.84	0.13
10	0.873	-1.18	2.32	1.71	55	0.240	-12.38	-8.88	0.13
11	0.847	-1.44	2.06	1.61	56	0.238	-12.46	-8.96	0.13
12	0.820	-1.73	1.77	1.50	57	0.235	-12.57	-9.07	0.12
13	0.790	-2.05	1.45	1.40	58	0.232	-12.71	-9.21	0.12
14	0.759	-2.40	1.10	1.29	59	0.227	-12.87	-9.37	0.12
15	0.726	-2.78	0.72	1.18	60	0.222	-13.08	-9.58	0.11
16	0.693	-3.19	0.31	1.07	61	0.216	-13.30	-9.80	0.10
17	0.657	-3.65	-0.15	0.97	62	0.210	-13.55	-10.05	0.10
18	0.621	-4.14	-0.64	0.86	63	0.204	-13.83	-10.33	0.09
19	0.584	-4.68	-1.18	0.76	64	0.196	-14.14	-10.64	0.09
20	0.545	-5.26	-1.76	0.67	65	0.189	-14.47	-10.97	0.08
21	0.507	-5.91	-2.41	0.57	66	0.181	-14.85	-11.35	0.07
22	0.468	-6.60	-3.10	0.49	67	0.173	-15.23	-11.73	0.07
23	0.428	-7.36	-3.86	0.41	68	0.165	-15.66	-12.16	0.06
24	0.389	-8.20	-4.70	0.34	69	0.157	-16.11	-12.61	0.05
25	0.350	-9.12	-5.62	0.27	70	0.148	-16.59	-13.09	0.05
26	0.311	-10.14	-6.64	0.22	71	0.139	-17.11	-13.61	0.04
27	0.273	-11.28	-7.78	0.17	72	0.131	-17.69	-14.19	0.04
28	0.235	-12.56	-9.06	0.12	73	0.122	-18.28	-14.78	0.03
29	0.199	-14.04	-10.54	0.09	74	0.113	-18.93	-15.43	0.03
30	0.163	-15.77	-12.27	0.06	75	0.104	-19.64	-16.14	0.02
31	0.128	-17.86	-14.36	0.04	76	0.095	-20.42	-16.92	0.02
32	0.095	-20.49	-16.99	0.02	77	0.087	-21.25	-17.75	0.02
33	0.062	-24.11	-20.61	0.01	78	0.078	-22.19	-18.69	0.01
34	0.032	-30.02	-26.52	0.00	79	0.069	-23.22	-19.72	0.01
35	0.010	-40.00	-36.50	0.00	80	0.060	-24.40	-20.90	0.01
36	0.025	-31.91	-28.41	0.00	81	0.052	-25.74	-22.24	0.01
37	0.051	-25.78	-22.28	0.01	82	0.043	-27.33	-23.83	0.00
38	0.076	-22.41	-18.91	0.01	83	0.035	-29.24	-25.74	0.00
39	0.098	-20.14	-16.64	0.02	84	0.026	-31.71	-28.21	0.00
40	0.119	-18.47	-14.97	0.03	85	0.018	-35.09	-31.59	0.00
41	0.138	-17.18	-13.68	0.04	86	0.010	-40.00	-36.50	0.00
42	0.156	-16.15	-12.65	0.05	87	0.010	-40.00	-36.50	0.00
43	0.171	-15.32	-11.82	0.07	88	0.010	-40.00	-36.50	0.00
44	0.185	-14.64	-11.14	0.08	89	0.015	-36.31	-32.81	0.00
					90	0.023	-32.64	-29.14	0.00